

**GEOLOGIC MAP OF THE
MOUNT ESCALANTE QUADRANGLE,
IRON COUNTY, UTAH**

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QUADRANGLE LOCATION

MAP SYMBOLS

CONTACT

Dashed where location inferred

NORMAL FAULT

Bar and ball on downthrown side;
dashed where location inferred;
dotted where covered.

STRIKE AND DIP OF BEDDING

Inclined Vertical

STRIKE AND DIP
OF IGNEOUS FOLIATION

Inclined Vertical

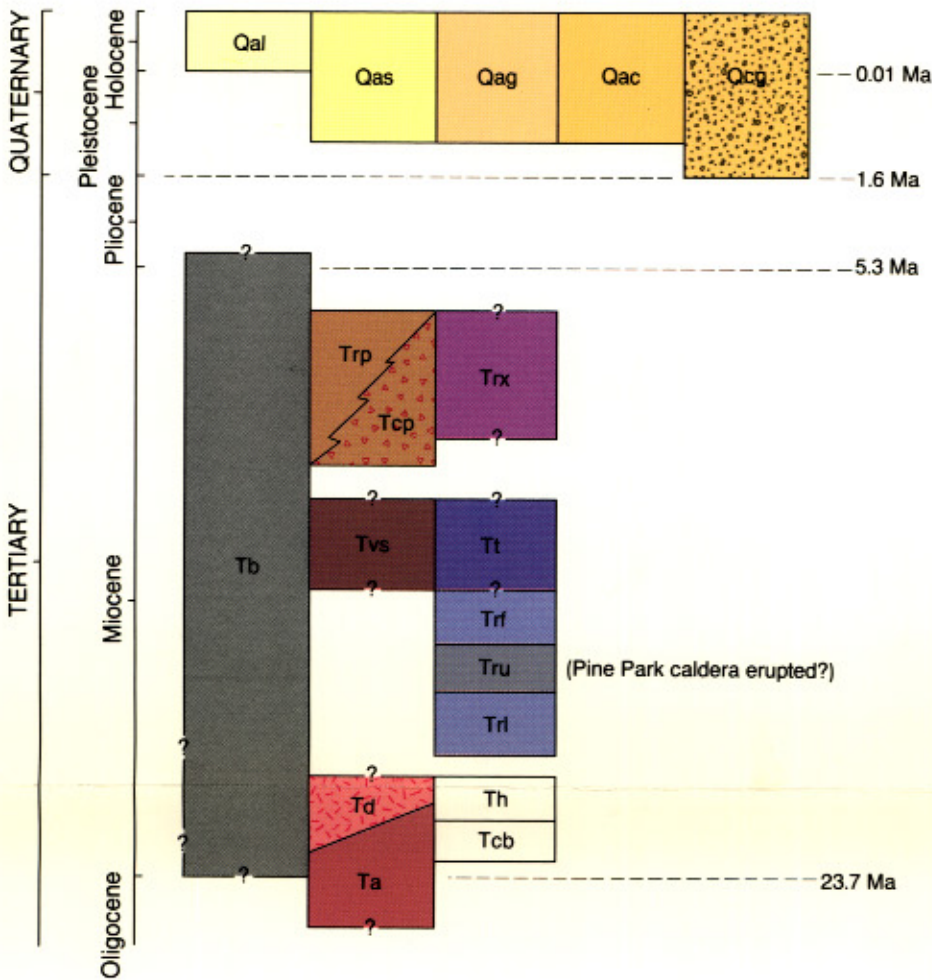
TOPOGRAPHIC WALL OF CALDERA

Covered

LINEATION

Faint linear alignment of vegetation or strong
topographic alignment seen on aerial photographs,
possibly related to faults or to fault-controlled
surface drainage.

CORRELATION OF MAP UNITS



DESCRIPTION OF MAP UNITS

- Qal** Alluvium (Holocene) — Unconsolidated silt and silty sand in ephemeral stream channels.
- Qas** Quartzose sand and silt (Holocene and Pleistocene?) — Unconsolidated, mainly quartz-rich sands derived from weathering of the Racetrack Canyon Tuff, transitional to Qag.
- Qag** Sand and gravel of piedmont fans (Holocene and Pleistocene?) — Unconsolidated sand and gravel covering slopes and plains. Also includes sand and gravel deposits with fan morphology.
- Qac** Sand and gravel of sheetwash deposits (Holocene and Pleistocene?) — Unconsolidated sand and gravel with strong colluvial component, transitional to Qcg, Qag, and Qas.
- Qcg** Colluvium (Holocene and Pleistocene) — Unconsolidated, bouldery to pebbly deposits occurring on slopes and hill tops.
- Tb** Basaltic lava flows (Pliocene?, mainly Miocene) — 0-200 feet, medium to dark-gray to black, coarse-grained porphyritic to aphanitic lava flows. Many of these flows occur as isolated, erosional remnants throughout the map area.
- Trp** Rhyolitic flow member (Miocene; 12.8 Ma) — Exposed thickness of 0-1000 feet. Sparsely porphyritic, flow-layered, mottled purple-gray, gray, buff to pink rhyolitic flows, some of which have spherulitic, black to brick-red vitrophyres.
- Tcp** Clastic member (Miocene) — Exposed thickness of 0-400 feet. A crystal-poor, yellowish tuff breccia charged with reddish-purple rhyolitic lithic fragments. Underlying and interbedded with Trp.
- Tvs** Volcanic and sedimentary sequence (Miocene; 16.0 Ma) — Exposed thickness of 0-200 feet. A bedded, basin-fill sequence of non-welded tuff, airfall tuff, and tuffaceous sedimentary rocks.
- Tt** Airfall tuff (Miocene; 16.7 Ma) — 0-10 feet. An assortment of airfall lapilli tuff, pumice-rich tuffaceous sediments, and fine-grained, bedded tuffaceous sandstone.
- Trf** Rhyolitic lava flow member (Miocene) — Exposed thickness of 0-300 feet. Generally perlitic, porphyritic flows that contain subequal amounts of quartz, plagioclase, and sanidine in a gray glassy matrix.
- Tru** Upper tuff member (Miocene; 17.2 Ma) — Exposed thickness 0-300 feet. Predominantly a weakly welded, cream-colored tuff charged with yellow pumice and 20 to 40% crystals. This member also includes quartz-rich sandstone and siltstone interbeds, derived from reworking of the lower tuff member.
- Trl** Lower tuff member (Miocene; 19.2 Ma) — Exposed thickness of 0-500 feet. A very pale-gray to pale-pink, weakly to moderately welded, crystal tuff, with sparse lithic fragments. Contains an average of 40-50% phenocrysts, listed in order of decreasing abundance these are: plagioclase, quartz, sanidine, biotite, Fe-Ti oxides, and trace hornblende and sphene.
- Th** Harmony Hills Tuff (Miocene; 21 Ma) — ON CROSS SECTION ONLY. A moderately welded, crystal-rich, dacitic tuff containing uncut 50% crystals. Large and conspicuous plagioclase and biotite phenocrysts dominate, with lesser amounts of hornblende, quartz, pyroxene and Fe-Ti oxides. Crops out a short distance north of the mapped area.
- Tcb** Bauers Tuff Member of the Condor Canyon Formation (Miocene; 22 Ma) — ON CROSS SECTION ONLY. A densely welded rhyolitic tuff that is reddish-brown in color, with abundant and distinctive light-gray, flattened lenticles. Crops out several miles north of the map area.
- Td** Dacite lava flows (Miocene; about 22 Ma) — Exposed thickness of 0-300 feet. A strongly porphyritic dacite containing conspicuous plagioclase and biotite, along with lesser amounts of clinopyroxene, Fe-Ti oxides, orthopyroxene, lithic fragments, altered mafic grains, zircon, apatite, and orthopyroxene.
- Ta** Andesitic lava flows (Miocene and Oligocene) — Exposed thickness of 0-200 feet. Porphyritic, two-pyroxene andesitic and altered mafic flows that contain plagioclase, clinopyroxene, Fe-Ti oxides, orthopyroxene, lithic fragments, altered mafic grains, and trace amounts of hornblende, biotite, zircon, and apatite.

